

承認書

SPECIFICATION FOR APPROVAL

樣品承認 新品承認 規格/材質變更承認

| | | | |
|---------------------------------------|---|---------|----------|
| 客戶名稱(Customer): | 東荃科技股份有限公司 | | |
| 客戶料號(Customer P/N): | 5060-A137CC+460 | | |
| 產品料號(Product No.): | A8-A006-00522 | | |
| 產品品名(Product Name): | PCB 2.4GHz~2.5GHz/5.15~5.85GHz 3dBi/4.5dBi 31mmx17mm T0.8 black OD1.13 normal 65mm I-PEX plug | | |
| 文件編號(Approved No): | | | |
| 日期(Issued Date): | 2019 年 03 月 14 日 | | |
| 客戶承認簽章 Customer Approval Signature | In Charge | Checked | Approval |
| | | | |

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| 業務 | 核准 | 審核 | 主辦員 |
|----|----|----|-----|
| | | | |

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Specification

- **Electrical Properties :**

1. Frequency : 2.4GHz~2.5GHz/5.15~5.85GHz
2. Impedance : 50Ω
3. Return Loss : $\leq -10\text{dB}$
4. Peak Gain : 3dBi / 4.5dBi

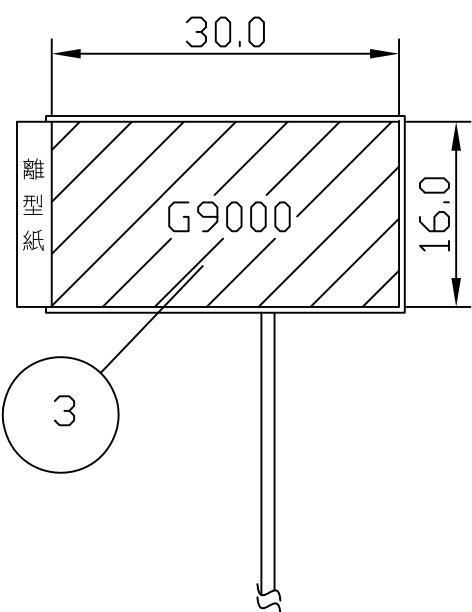
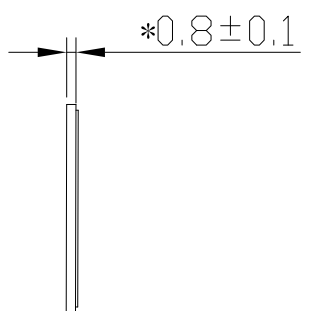
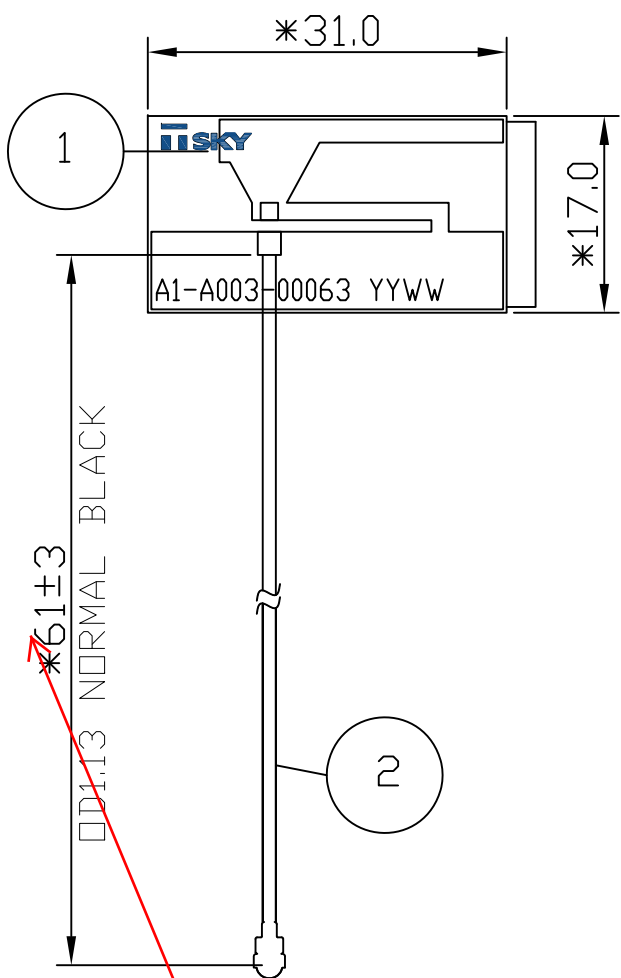
- **Physical Properties :**

1. Material : FR-4 T=0.8mm
2. Cable : OD1.13 NORMAL
3. Connector : I-PEX

(TOP VIEW)

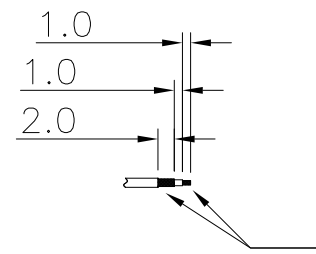
(SIDE VIEW)

(BOTTOM VIEW)



ELECTRICAL:
 Frequency: 2.4GHz~2.5GHz/5.15GHz~5.85GHz
 Impedance: 50Ω
 Peak Gain: 3dBi/4.5dBi
 Return Loss: ≤ -10dB

MECHANICAL:
 Cable: OD1.13 NORMAL BLACK L=65mm



- NOTE:
- 1.文字顏色為白色
 - 2.*為重點量測尺寸
 - 3.I-PEX方向請按照圖面所示
 - 4.YYWW為date code,會隨著生產週期產生序號

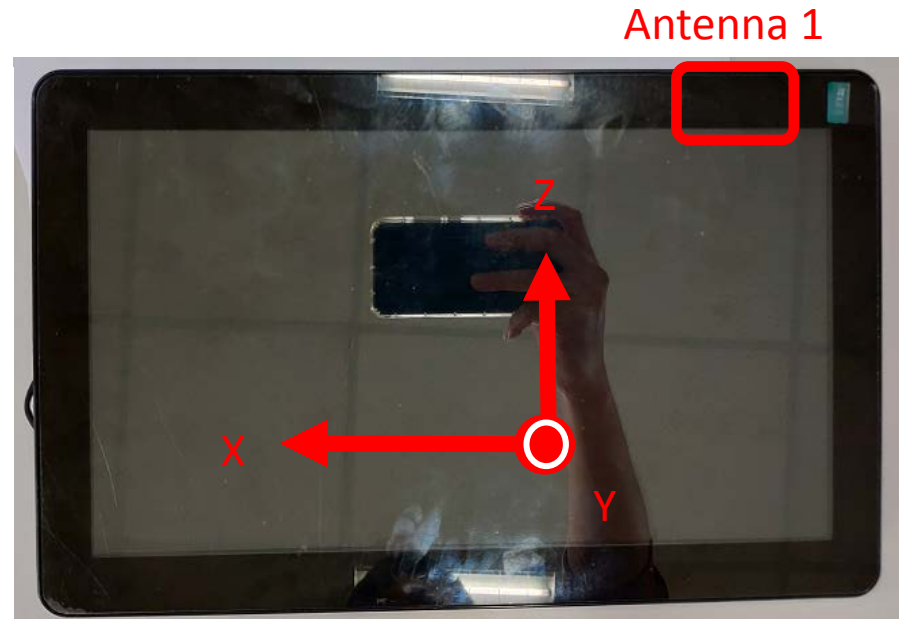
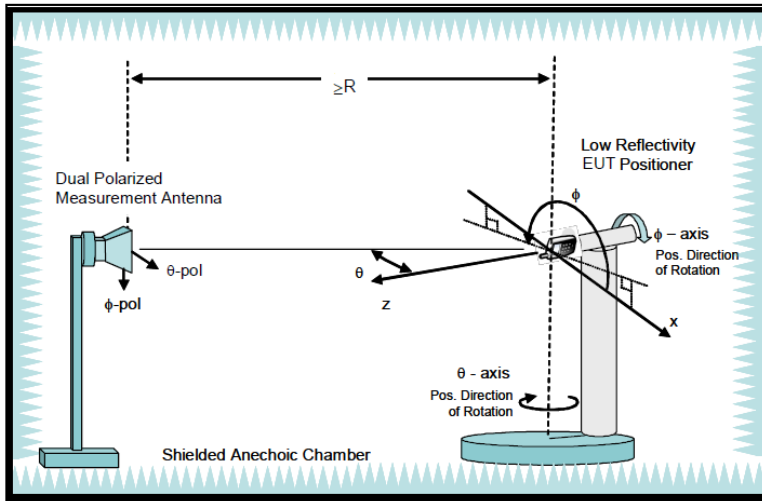


I-PEX 向內

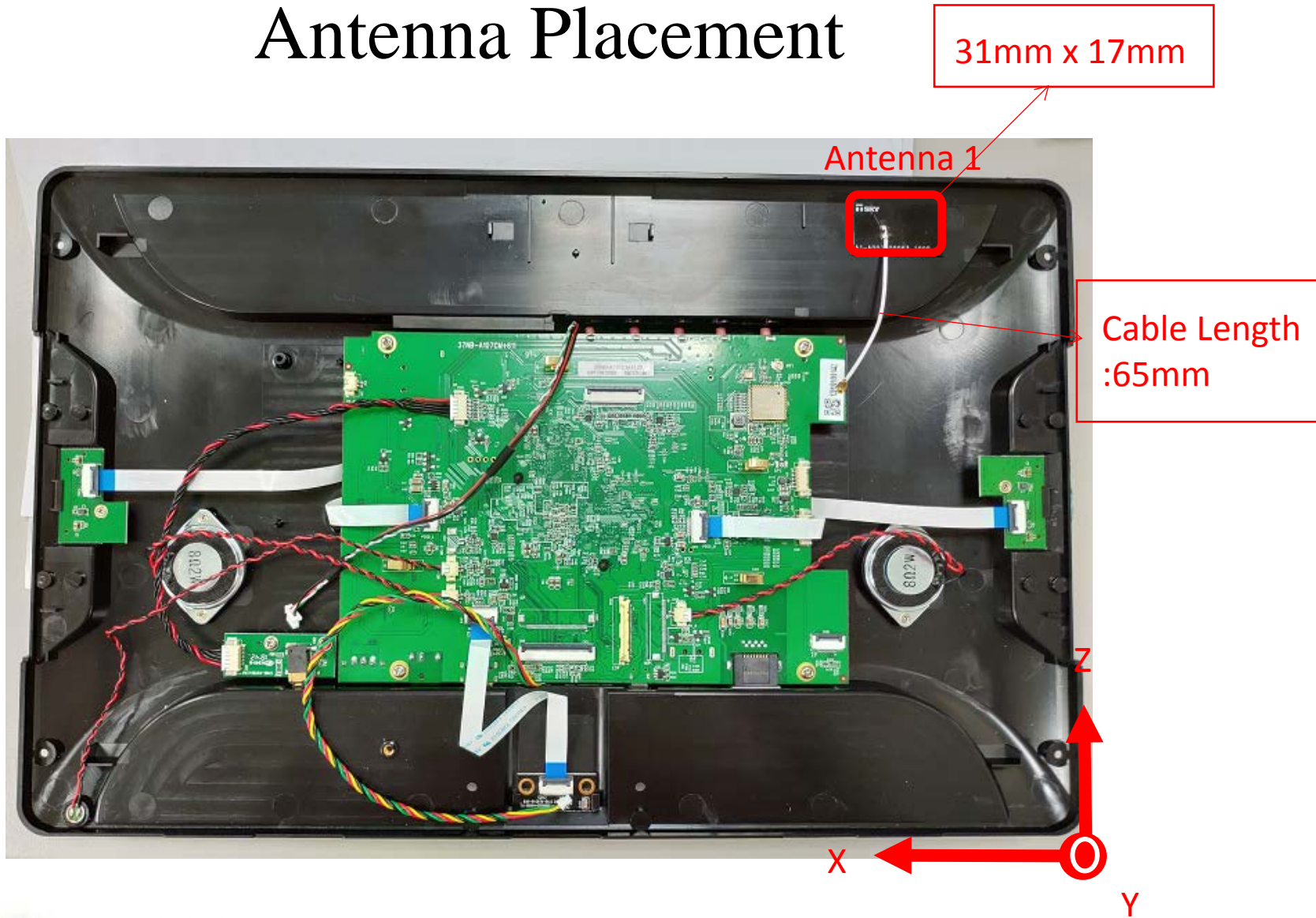
扣除焊接段長度

| | | | | |
|--------------------------------------|---------------|--|----------|----------------------------------|
| 3 | A2-A001-00033 | 30x16mm G9000 雙面背膠 | 1 | A |
| 2 | A0-A002-00120 | RF CABLE OD1.13 NORMAL 65mm BLACK IPEX PLUG+2(編)-1(絕)-1(芯) | 1 | A |
| 1 | A1-A003-00063 | PCB ANT FR-4 L31 W17 T0.8mm 單面OSP雙面黑漆 FOR A8-A006-00522 | 1 | A |
| NO. | PART NO. | DESCRIPTION | Q'TY | REV. |
| TOLERANCE UNLESS OTHERWISE SPECIFIED | | TSKY CO., LTD. | | INITIAL MODEL: |
| DIMENSION | | CONFIDENTIAL | FINISH: | PART NAME |
| .X± | 0.2 | SIZE: | A4 | PCB 2.4GHz~2.5GHz/5.15~5.85GHz |
| .XX± | 0.1 | DRAWING | DESIGNED | 3dBi/4.5dBi 31mmx17mm T0.8 black |
| .XXX± | 0.05 | Jane | GARY | OD1.13 normal 65mm I-PEX plug |
| | | UNIT: | mm | PART NO. |
| | | SCALE: | 1 : 1 | A8-A006-00522 |
| | | APPROVED | GARY | REV. |
| | | | | A |
| | | | | SHT. |
| | | | | 1/1 |

Antenna Coordinate System Definition

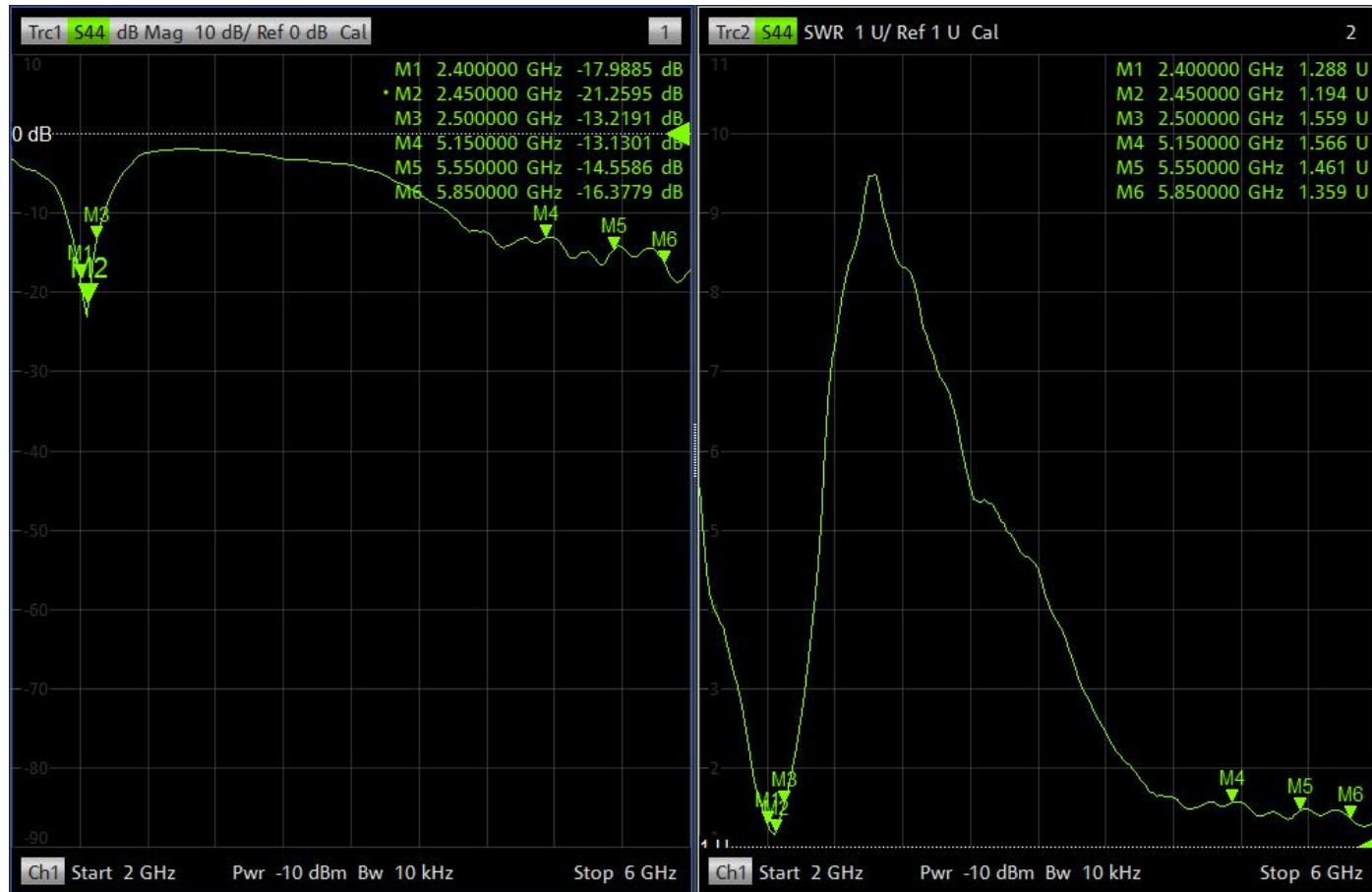


Antenna Placement



Antenna 1

Return Loss and VSWR



Antenna 1

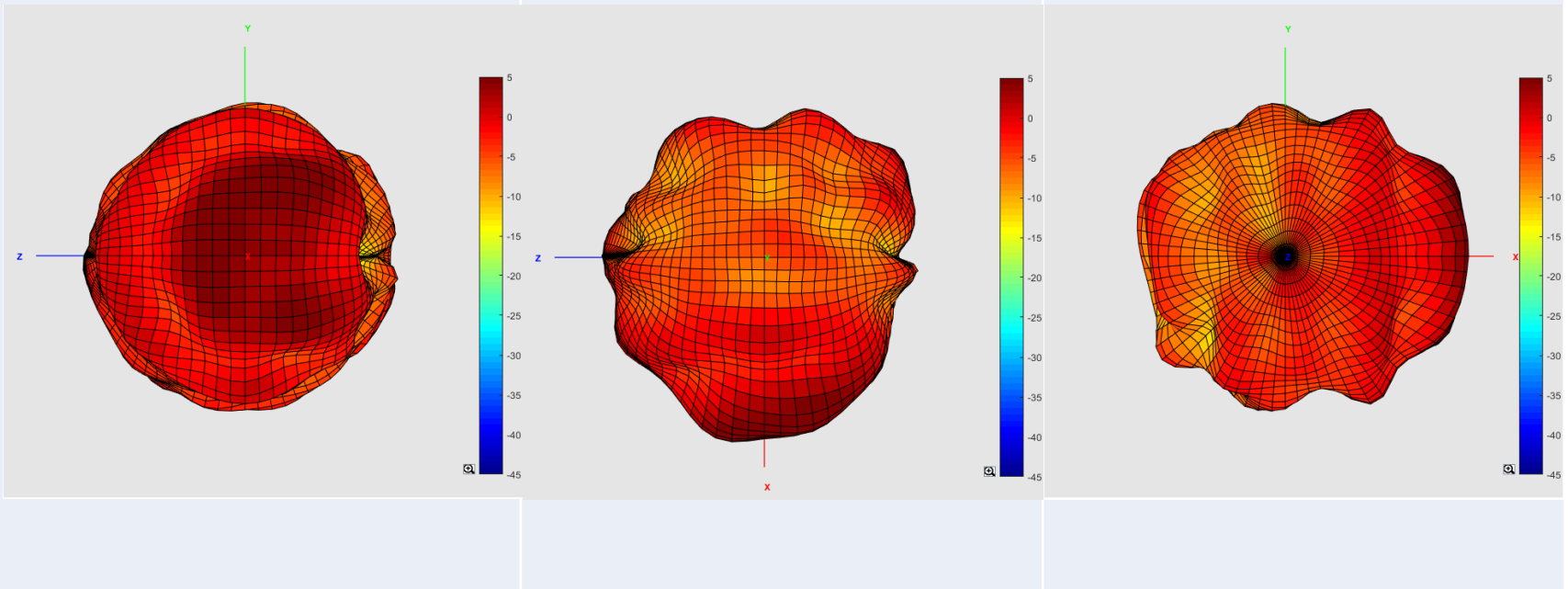
3D Radiation Pattern

2.4GHz

X-axis View

Y-axis View

Z-axis View

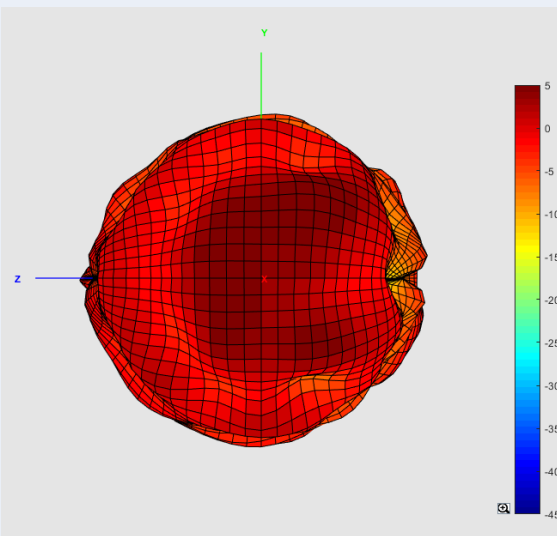


Antenna 1

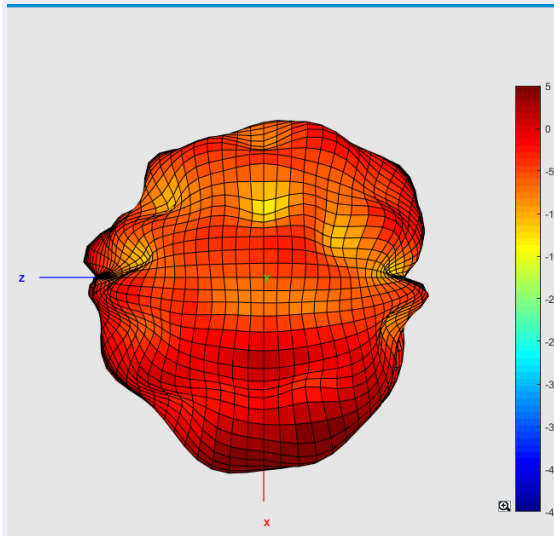
3D Radiation Pattern

2.45GHz

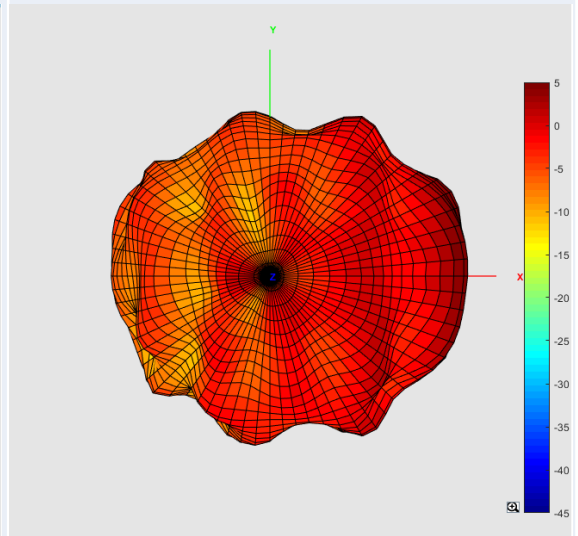
X-axis View



Y-axis View



Z-axis View



Antenna 1

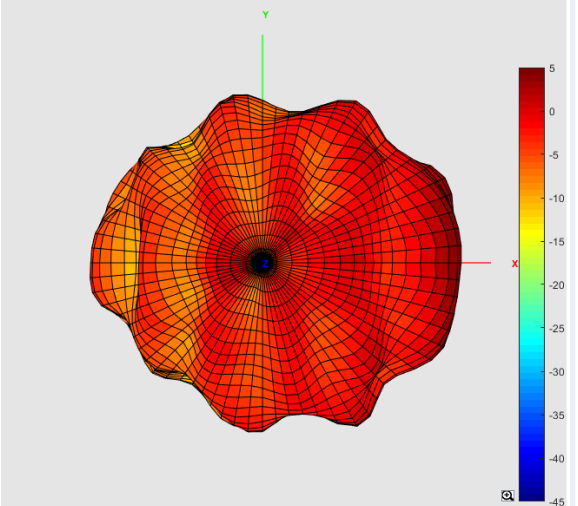
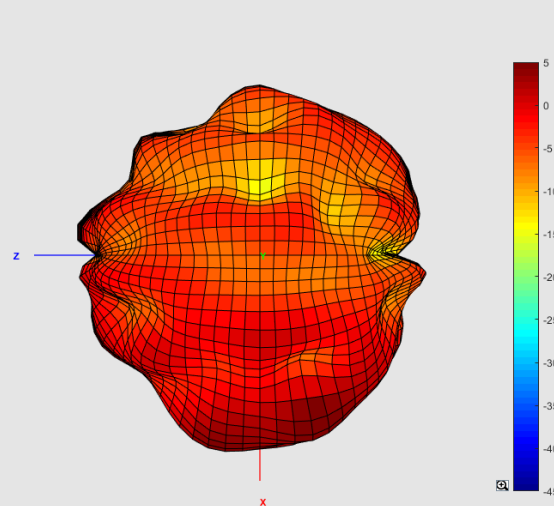
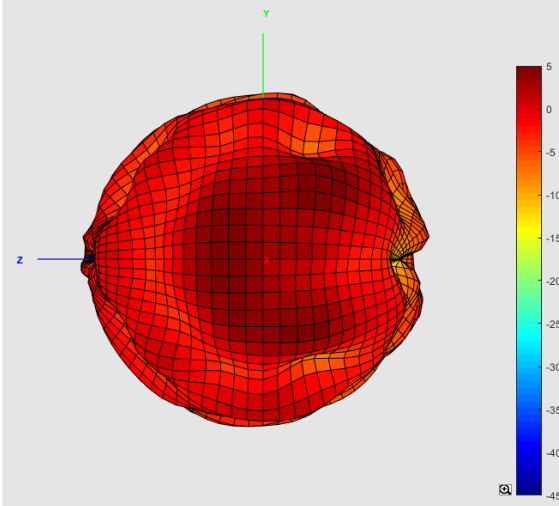
3D Radiation Pattern

2.5GHz

X-axis View

Y-axis View

Z-axis View

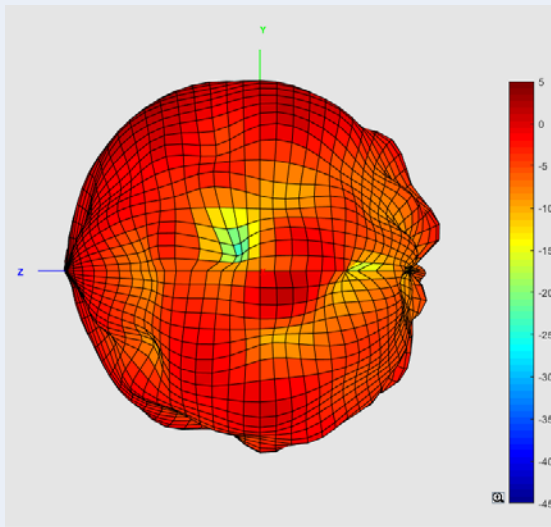


Antenna 1

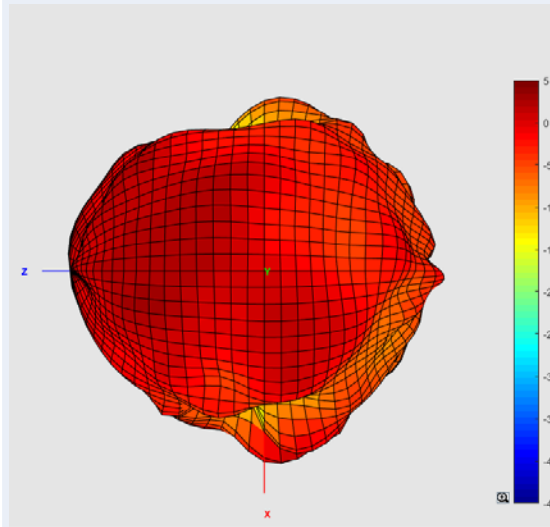
3D Radiation Pattern

5.15GHz

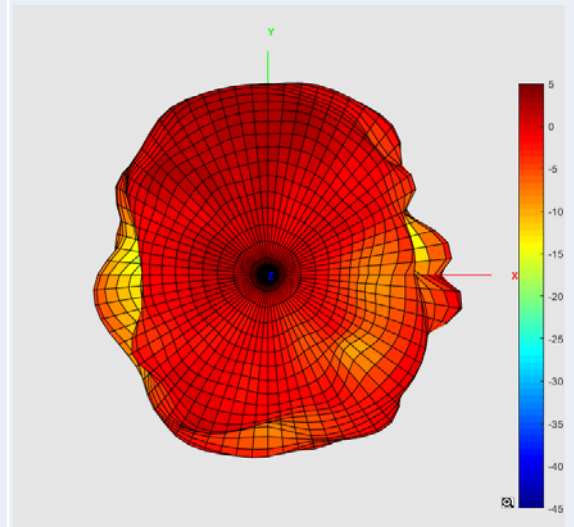
X-axis View



Y-axis View



Z-axis View

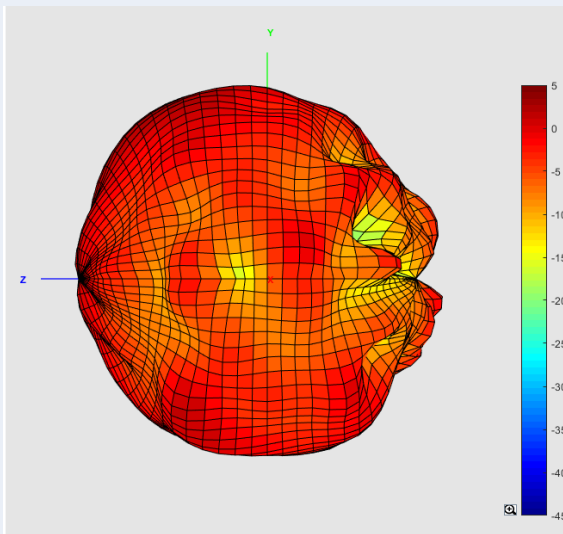


Antenna 1

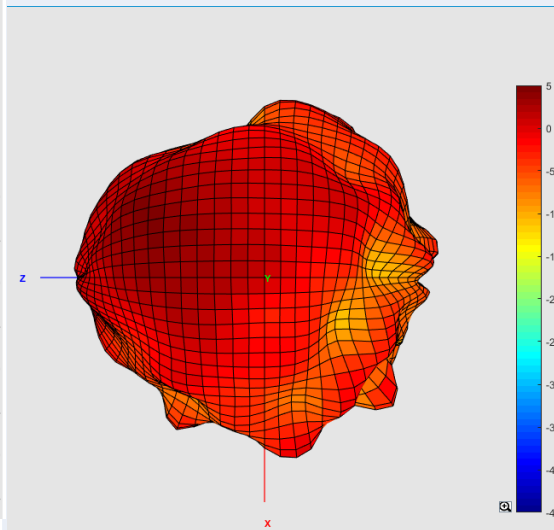
3D Radiation Pattern

5.55GHz

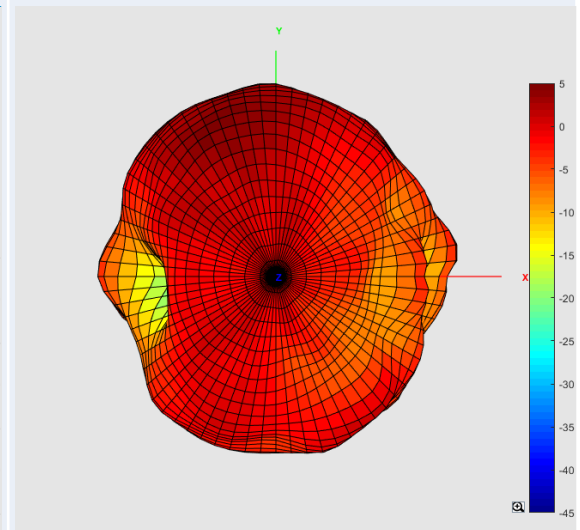
X-axis View



Y-axis View



Z-axis View

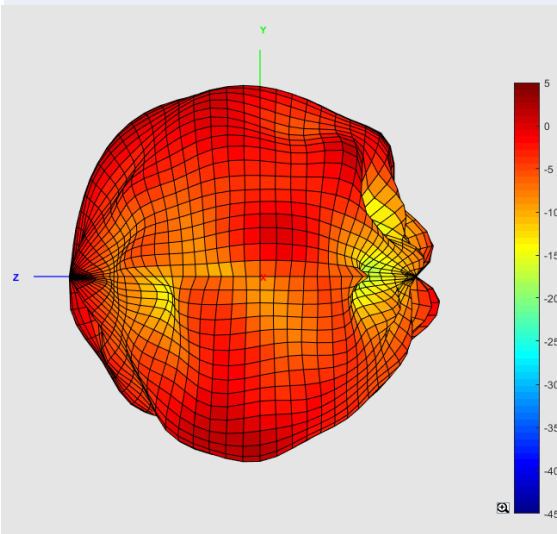


Antenna 1

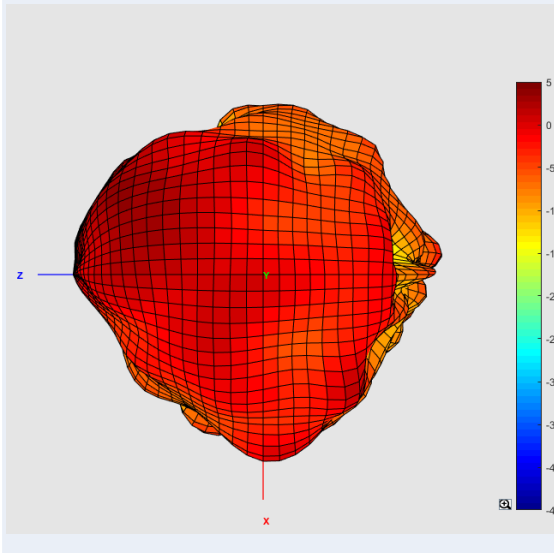
3D Radiation Pattern

5.85GHz

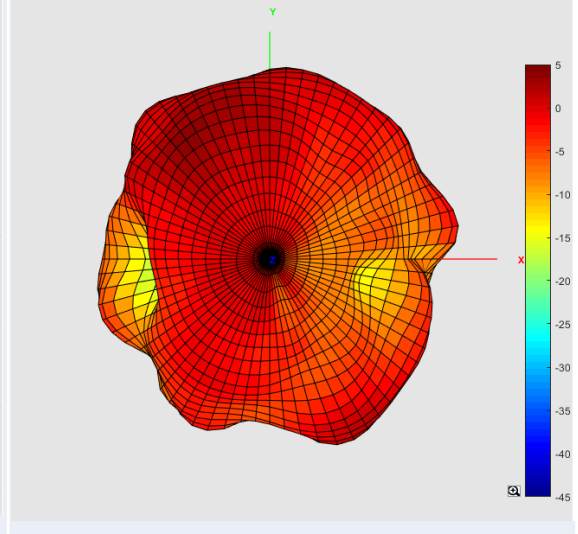
X-axis View



Y-axis View



Z-axis View



Antenna 1

Antenna Gain and Efficiency

| Frequency(MHz) | 2400 | 2410 | 2420 | 2430 | 2440 | 2450 | 2460 | 2470 | 2480 | 2490 | 2500 |
|------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Directivity(dBi) | 7.68 | 7.76 | 7.82 | 7.74 | 7.76 | 7.72 | 7.73 | 7.66 | 7.62 | 7.52 | 7.43 |
| Efficiency(dB) | -2.41 | -2.57 | -2.38 | -2.28 | -2.33 | -2.16 | -2.43 | -2.27 | -2.39 | -2.57 | -2.64 |
| Efficiency(%) | 57.41 | 55.34 | 57.81 | 59.16 | 58.48 | 60.81 | 57.15 | 59.29 | 57.68 | 55.34 | 54.45 |
| Gain(dBi) | 5.27 | 5.19 | 5.44 | 5.46 | 5.43 | 5.56 | 5.3 | 5.39 | 5.23 | 4.95 | 4.79 |

Antenna 1

Antenna Gain and Efficiency

| Frequency(MHz) | 5150 | 5250 | 5350 | 5450 | 5550 | 5650 | 5750 | 5850 |
|------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| Directivity(dBi) | 5.56 | 5.98 | 6.47 | 7.25 | 6.75 | 7.09 | 7.1 | 7.02 |
| Efficiency(dB) | -2.81 | -2.76 | -2.11 | -2.59 | -2.65 | -3.19 | -2.74 | -3.46 |
| Efficiency(%) | 52.36 | 52.97 | 61.52 | 55.08 | 54.33 | 47.97 | 53.21 | 45.08 |
| Gain(dBi) | 2.75 | 3.22 | 4.36 | 4.66 | 4.1 | 3.9 | 4.36 | 3.56 |